

Autonomous Racer



Objective

- Objective: Teams will build a vehicle that can complete a 20-foot straightaway course with the fastest time. There will be various obstacles in the path of the vehicle that it will have to navigate over in order to complete the course. Likely obstacles include pebbles, foam rods, and plastic stripping; none will be any larger than $\frac{1}{2}$ inch. Vehicles must be non-electrical. Race will be a head to head competition with the winner progressing to the next round.

Parameters

- The maximum weight for each vehicle is 12 pounds
- Robot must fit within a 4-gallon crate that is 13" x 13" x 11" at check-in (but can be engineered to include extensions)
- Non-electrical vehicle must be able to move independently without a remote control
- Vehicles cannot alter pathway or obstacles while navigating path

Notes

- All vehicles must be weighed and checked for correct sizing before competition begins. If they do not meet size or weight requirements they will be immediately disqualified.
- If vehicles complete the course with the exact same times, they will have to run the course again backwards to determine the final winner.
- If no vehicles complete the course within the 3-minute period, the vehicle that finishes the greatest amount of the course will advance to the next round.

Materials

- Vehicle must meet weight and size requirements
- No user input will be allowed to control vehicle during competition; it must be autonomous
- No pre-assembled kits will be permitted